

1. Features

- **Video Decoder**

Accepts NTSC (M), PAL (B, D, G, H, I, M, Nc)
Hardware Fast Switch function
Fast Switch also controllable by software or external pin
Software channel ID in active region
Four 10-bits video ADCs with built in 6.5 MHz analog low pass filter
Automatic gain control for Luminance and Chrominance
Programmable brightness, contrast, saturation, hue, and sharpness
5-H comb filter for YC separation
Chrominance line filter for PAL phase error
DLL for video synchronization, supports 27MHz crystal within +/-1000 ppm variance
Advanced video synchronization for weak and noisy CVBS. Supports video signal transmitted by 500-meter long cable
Up to 4 CCIR656 output interfaces which could be configured as 4 sets of CCIR656 (27MHz) or 2 sets of TDM2 (54MHz) or 2 set of TDM4 (108MHz)
Support line lock camera

- **Audio Codecs**

- Five audio ADCs and one audio

DAC are integrated

- Master I2S/DSP playback, record and audio-mixing
- Supports extended I2S/DSP format transmitting up to 16 audio channels using one data pin
- Audio cascade up to 16 channels
- 16-bit or 8-bit 48/24/16/8 KHz PCM format

- **Miscellaneous**

- Use a single external 27MHz crystal to support 720H video
- Two programmable PLLs integrated
- Slave I2C bus
- Ultra low power consumption. Under 500mW for normal operation. Under 50mW for suspend mode.
- 128-pin LQFP package (14mmx14mm)
- 1.8V core power, 3.3V analog power and 1.8V analog power

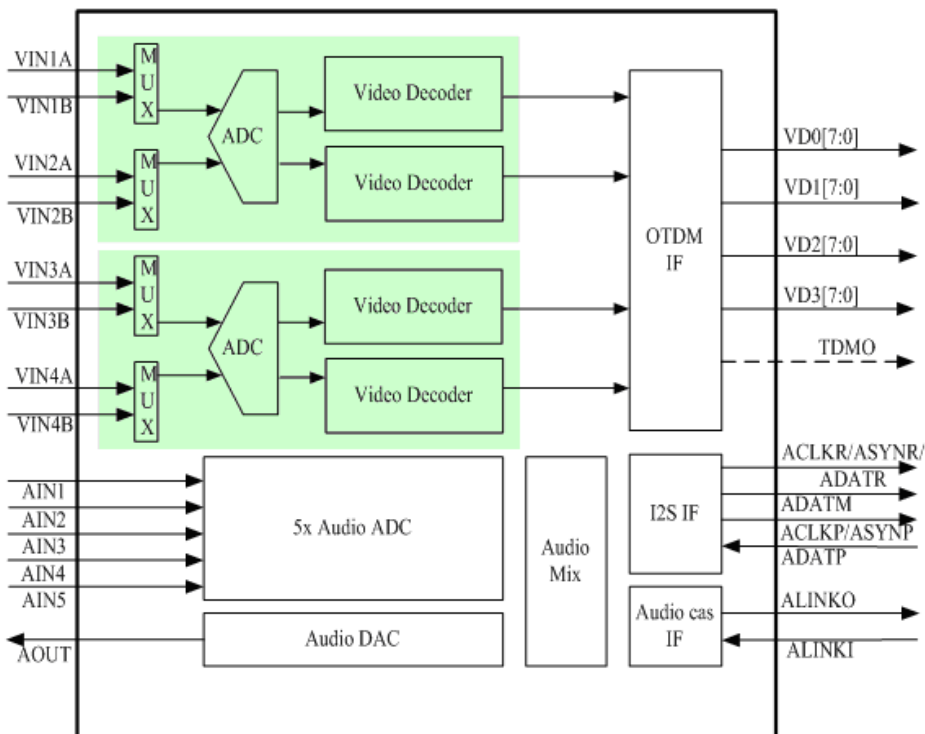
2. General Description

The DM5865 is a 4-channel video decoder which converts 4 channels of 6.5 MHz analog CVBS signals to 4 channels of digital 27 MHz CCIR656 signals. The DM5865 integrates two internal PLLs, and decodes 720H videos using the same (27MHz) external clock source. The DM5865 also features a patented fast switch function. With the fast switch function, the

DM5865 can decode up to 8 analog CVBS with little frame rate loss.

The DM5865 also includes five audio ADCs and one audio DAC. Audio cascade up to 16 channels is also supported.

2. Block Diagram



3. Applications

- DVR
- Car DVR
- Video capture card

4. Ordering Information

Part Number	Pin Count	Package
DM5865EP	128	LQFP (Pb-Free and Halogen-Free)